

REMARKS

Claims 1-3, 5, 6, 8-17 and 19-24 are pending in the application. Claims 4, 7, and 18 have been cancelled without prejudice or disclaimer thereto.

It is noted that the claims amendments are made only for pointing out the claimed invention more particularly, and not for distinguishing the invention over the prior art, narrowing the claims, or for statutory requirements for patentability. Further Applicant specifically states that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claims 1-24 stand rejected under 35 U.S.C. § 102 as being unpatentable under Sandholm (U.S. Patent Publication No. 2004/0024686 A1).

Applicant respectfully traverses these rejections in the following discussion.

I. THE CLAIMED INVENTION

An exemplary aspect of the claimed invention, as recited in independent claim 1, is directed to a display for scaling a plurality of bids and items, on a display window. The display scales viewable objects representing the bids and items, such that as a number of bids and items increases, a size of the viewable objects representing the bids and objects decreases. A processor coupled to said display, a mechanism for enabling a user to interactively generate an ad hoc solution by using visual operations, and for comparing the solutions with an optimal solution generated by said processor, a real-time recommendation window for providing at least one recommendation on what action to take next in generating an ad hoc solution.

Another exemplary aspect of the claimed invention, as recited in independent claim

17, is directed to a method of interactive bid evaluation for a combinatorial auction, including scaling a plurality of bids and items displayed on a display window, and scaling viewable objects representing the bids and items such that as a number of the bids and items increases, a size of the viewable objects representing the bids and items decreases, providing a real-time recommendation window for providing at least one recommendation on what action to take next in generating an ad hoc solution, displaying supporting information including any of items, bids, constraints, analysis, and results, and optimal solutions on the displays, to allow interactive selection of an optimal solution from the bid evaluation system, the supporting informant providing a visualization of how the optimal solution satisfies a demand for each item and each constraint thereon, enabling a user to dynamically update auction parameters including any of items in the auction, bundle bids under consideration, and changing constraints and a reserve price, and generating the ad hoc and optimal solutions iteratively for exploratory analysis, and generating interactively an optimal solution for an auction after pre-assigning at least one bundle bid to a winning bid pool.

Another exemplary aspect of the claimed invention, as recited in independent claim 22, is directed to a method of evaluating bids in a combinatorial auction, including structuring bid and item information on a visual interface of a display and providing an analysis capability for facilitating evaluation and selection of at least one solution encompassing bids in a real-time recommendation window for providing at least one recommendation on what action to take next in generating an ad hoc solution. The visual interface allows a user to directly manipulate data points in the visual interface to explore an information space of potential solutions and suppliers and to discover at least one solution optimal to the user's needs.

Conventional bid evaluations present information in a non-intuitive manner. The decision processes are formalized and based on decision tree and pruning techniques. Furthermore, conventional bid evaluations are presented with no explanation, simply making their decisions as a “black box.” Finally, conventional bid evaluations do not provide interactive analysis features.

The claimed invention, however, “scales viewable objects representing said bids and items, such that as a number of bids and items increases, a size of said viewable objects representing said bids and objects decreases,” as recited in independent claim 1. This is important for explaining a proposed bid in a reverse auction. *See* the Application, page 18, lines 5-11.

II. THE ALLEGED PRIOR ART REFERENCE

On page 2 of the Office Action, the Examiner alleges that Sandholm discloses the invention of **claims 1-24**. In particular, with respect to independent claims 1 and 17, the Examiner alleges that Sandholm discloses “scaling a plurality of bids and items displayed on a display window.” The Examiner also alleges that paragraphs 12-19 of Sandholm disclose this feature.

Sandholm is directed to a static system for determining bids for various auctions. In particular, Sandholm discloses the use of decision trees to determine various bid combinations. These decision trees are then pruned to come up with the solutions.

Contrary to the Examiner’s allegations, however, Sandholm does not disclose or suggest a visual and interactive method of relating these bid auction solutions. That is, “a display for scaling a plurality of bids and items, on a display window,” as recited in

independent claim 1.

Furthermore, Sandholm does not disclose or suggest, among other things, “a processor coupled to said display; a mechanism for enabling a user to interactively generate an ad hoc solution by using visual operations, and for comparing the solutions with an optimal solution generated by said processor; and a real-time recommendation window for providing at least one recommendation on what action to take next in generating an ad hoc solution,” as recited in independent claim 1

Because Sandholm does not disclose or suggest a visual representation of the proposed bid solutions and instead only discloses pruning a decision tree of bid possibilities, the outcome of this process is presented to a user essentially as coming from a black box, without any useful visual representation.

Next, Sandholm does not disclose or suggest that the display unit performs “scaling viewable objects representing said bids and items such that as a number of bids and items increases, a size of said viewable objects representing said bids and items decreases,” as recited in independent claim 17. Instead, Sandholm only discloses pruning a decision tree of bid possibilities. Again, the outcome of this process is presented to a user essentially as coming from a black box, without any useful visual representation.

Furthermore, Sandholm does not disclose or suggest, among other things, “displaying supporting information including any of items, bids, constraints, analysis, and results, and optimal solutions on said displays, to allow interactive selection of an optimal solution from the bid evaluation system, said supporting informant providing a visualization of how the optimal solution satisfies a demand for each item and each constraint thereon” as recited in independent claim 17.

In addition, the Examiner rejects independent claim 22 under Sandholm by alleging that Sandholm discloses a method, system and computer-readable medium of evaluating bids in a combinatorial auction, including, for example, structuring bid and item information on a visual interface of a display.

Contrary to the Examiner's allegation that Sandholm discloses or suggests "structuring bid and item information on a visual interface of a display," as recited in independent claim 22, Sandholm, as described above, the outcome of this process is presented to a user essentially as coming from a black box, without any useful visual representation. That is, Sandholm does not disclose or suggest "structuring bid and item information on a visual interface of a display," as recited in independent claim 22.

Furthermore, independent claim 22 also recites that the "visual interface allows a user to directly manipulate data points in the visual interface to explore an information space of potential solutions and suppliers and to discover at least one solution optimal to the user's needs." Accordingly, instead of the tree decision matrix disclosed in Sandholm, claim 22 allows a user to visually manipulate auction bids to determine a solution.

Finally, Sandholm does not disclose or suggest, among other things, "providing an analysis capability for facilitating evaluation and selection of at least one solution encompassing bids in a real-time recommendation window for providing at least one recommendation on what action to take next in generating an ad hoc solution," as recited in independent claim 1

Accordingly, despite the allegations of the Examiner, Sandholm does not disclose or suggest an auction system that includes a "visual interface" that "allows a user to directly manipulate data points in the visual interface to explore an information space of potential

solutions and suppliers and to discover at least one solution optimal to the user's needs," as recited in independent claim 22.

In summary, Sandholm does not disclose or suggest any of these intuitive visual landscape helping understandability, interactive graphical user interface control helping finding ad hoc solutions, interactive what-if, and sensitivity analyses. For example, thus, while the Examiner alleges that paragraph 109 of Sandholm discloses, "display displays supporting information," as on page 3 of the Office Action, Sandholm discusses Figure 11 where different combination of bids include "OR" or "XOR" constraints placed between bids B1 and B2 and not "scaling a plurality of bids and items displayed on a display window," as recited in claim 1.

With respect to claims 2-3, 5, 6, 8-16 and 20, 21, and 23-24, which depend from independent claims 1, 17, and 22, respectively, each of these claims contains all the limitations contained within independent claims 1, 17, and 22 and are therefore also in condition for allowance.

Therefore, Applicant respectfully requests the Examiner to reconsider and withdraw this rejection.

III. FORMAL MATTERS AND CONCLUSION

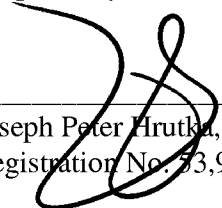
In view of the foregoing, Applicant submits that claims 1-3, 5, 6, 8-17 and 19-24, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Assignee's Deposit Account No. 50-0510.

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Respectfully Submitted,



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